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The World of Wheels

Recently there has been increasing awareness towards the world's health; this is largely due to the rise of global warming and the ever deteriorating air quality of the Earth. Harmful gasses are emitted in huge quantities everyday, large amounts coming from the very thing that Americans value greatly, their car. While cars present a convenient and easy way to travel to and from places, they also harm the earth in ways that are irreversible. The fuel used to propel the cars is not renewable and is becoming scarcer in regions it was once abundant, meaning the value of the fuel is rising. There is a high cost for owning a car, but there are alternatives, one solution being present almost from the invention of the wheel: the bicycle. Bicycles provide a clean and easy mode of transportation; while it is a little inconvenient for some, it is one of the most efficient modes of travel. Cycling offers multiple solutions to problems faced by everyday drivers.

Today, a vast majority of the public owns a vehicle of some sort that runs off of gasoline. The gasoline that runs the cars mostly comes from oil that is shipped to the U.S. from overseas. The amount of gasoline that people consume requires large amounts of oil to be shipped, but everyday the supply for oil gets lower and lower. With the continuing war that is being fought overseas in the Middle East, oil is more expensive than ever. This cost of oil translates into how much money comes out of our wallet at the gas pump

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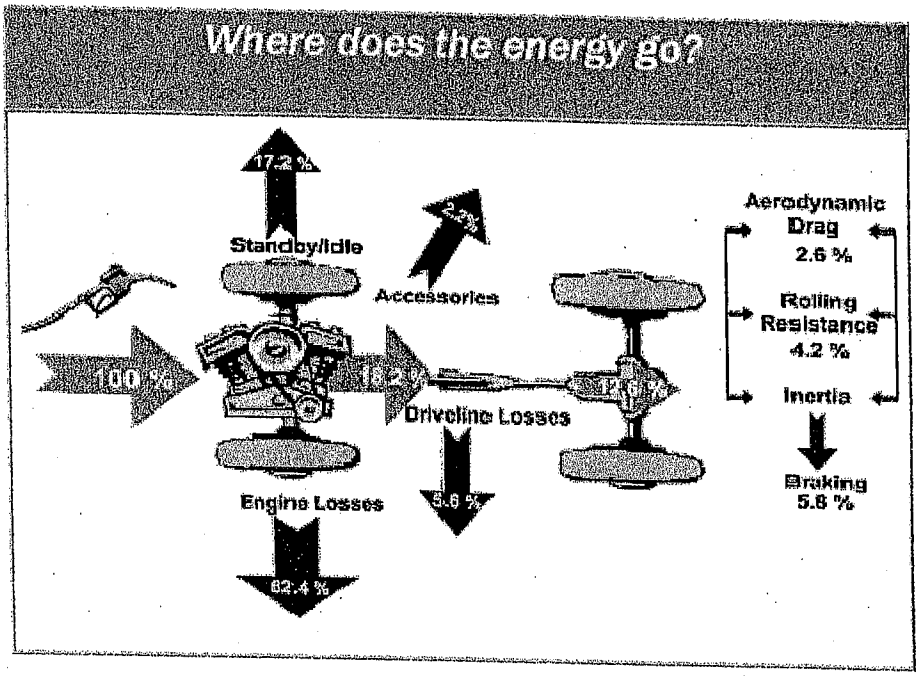
every time we fill up our car. The amount coming out is very high now and makes the cost of owning a car very expensive.

Not only do car owners have to fork out enough money to buy a car, there also has to be financial backing for the insurance of the car, and then a steady income of some sort to provide for the gas and maintenance. Of these expenditures we have to provide for our car, the gas and maintenance are cumulative. Maintaining your car isn't usually that expensive unless it is not well maintained, then it really needs maintenance, which can be quite expensive. The fuel for our engines can eventually add up to a lot of money spent.

Gasoline serves a very simple purpose: it explodes in the engine to spin things and make the tires propel the car forward. This is the original concept of fuel, to produce energy. The advancements in technology have created more efficient ways to get the gasoline to work towards moving the tires, and even ways to get around gasoline. There is also the option of leaving the car completely; other modes of transportation exist where you don't have to use your own gas. Options include taking public transporation, carpooling, walking or biking. While the first two options still use gasoline, the third option is completely safe and clean that does not depend on gasoline at all. The other two options utilize the gasoline in the vehicle more efficiently. When gas is pumped into your car's engine, the gas explodes, but not all the energy released in this explosion goes towards moving the tires. The energy that is used in moving the tires can move it quite efficiently even if there is more than one person in the car. Cars are made to carry more than one person; when only one person is traveling, the gas is being used poorly because a lot of energy is being lost to move only one person. When there are more passengers,

the vehicle efficiently uses the energy for more people. When running the car, energy is lost through different processes running the car (shown below).



(Source: fueleconomy.gov)

These losses can be improved through methods for your engine or for your transmission. However, with the new technologies, older cars do not have them and require money to install. The technologies improve, on average, the efficiency of your engine by about 7.5% (fueleconomy.gov). If all the technologies were to be added on your car, the efficiency would increase dramatically, resulting in almost fifteen miles per gallon extra on your vehicle. With the increased gas prices, in the long run the improvements would pay for themselves, it would just have to be a very long run. If the

price of gas is $3.00 a gallon, and the original miles per gallon of your car is 20, and you upgrade it to get 35 miles a gallon, over five years, driving it 15,000 miles a year, you would only save $4821 (fueleconomy.gov). That amount saved would barely pay for the upgrades. Owning the car for twenty years is when it really pays off, you save over $19,000. But while owning a car that long, new technologies will emerge and make it easier to get a more efficient car.

The new types of alternative fuel provide more fuels to use, some that are more abundant. The only problem is that they are new technologies and are not completely developed and will not be developed for use until later. Once these technologies are fully researched and become applicable, we are stuck with normal cars.

The normal gasoline car isn't a bad car but is becoming more of a hassle to own instead of a convenience. The automobile creates a way for transportation in our huge world, especially in a city like Houston, where everything is spread out so far. Cars allow us to travel great distances in little time, and do a good job at it. They are very convenient because of the mass abundance of cars. The roads and highways allow for us to go virtually anywhere, and fast. A majority of the population in Houston has a car and uses it everyday; when all the people use their car at the same time on the same roads, there results traffic, and Houston is ranked number five for rush-hour traffic (Cooley). Once again, all the money put into the car's gas is being used sitting countless hours idle in traffic and causing more harmful gasses to be released into the air. This is money being burnt. This fact combined with the amount of people driving their own cars and not using public transportation, results in Houston being the most expensive city to own a car in.

Rank	Metro Area	Transportation Expenditures per Year	as Percent of Total
1	Houston-Galveston-Brazoria, TX	$8,840	**22.1%**
2	Atlanta, GA	$8,513	**21.7%**
3	Dallas-Fort Worth, TX	$8,717	**19.7%**
4	Miami-Fort Lauderdale, FL	$6,684	**19.0%**
5	Detroit-Ann Arbor-Flint, MI	$6,710	**18.8%**
6	Minneapolis-St. Paul, MN-WI	$8,683	**18.4%**
7	Phoenix, AZ	$6,826	**18.2%**
8	Philadelphia-Wilmington-Atlantic City, PA-NJ-DE-MD	$6,904	**18.1%**
9	Kansas City, MO-KS	$6,489	**18.1%**
10	Tampa-St. Petersburg-Clearwater, FL	$5,864	**17.8%**
11	Anchorage, AK	$8,770	**17.7%**
12	St. Louis, MO-IL	$6,489	**17.6%**
13	Cleveland-Akron, OH	$6,384	**17.5%**
14	Pittsburgh, PA	$6,331	**17.5%**
15	Los Angeles-Riverside-Orange County, CA	$7,224	**17.4%**
16	Denver-Boulder-Greeley, CO	$7,361	**17.2%**
17	Seattle-Tacoma-Bremerton, WA	$7,387	**17.1%**
18	Portland-Salem, OR-WA	$6,848	**16.8%**
19	Cincinnati-Hamilton, OH-KY-IN	$6,145	**16.7%**
20	Milwaukee-Racine, WI	$5,800	**16.0%**
21	San Diego, CA	$6,319	**15.8%**
22	Washington, DC-MD-VA	$7,207	**15.4%**
23	Boston, MA-NH	$5,788	**15.2%**
24	San Francisco-Oakland-San Jose, CA	$7,150	**15.1%**
25	Chicago-Gary-Kenosha, IL-IN-WI	$5,436	**14.9%**
26	Baltimore, MD	$5,236	**14.7%**

27	New York-No. New Jersey-Long Island, NY-NJ-CT-PA	$5,956	**14.5%**
28	Honolulu, HI	$6,136	**14.4%**

(Source: Where You Live Matters)

Compared with all the other cities, Houston does not fare well. In fact, out of every dollar a household spends in Houston, over twenty-two cents is spent on transportation. With all these cars burning their gas, the gasses they emit begin to add up and take its toll on the environment.

So how do we save the environment and our wallets? While there is no real straightforward answer to that, we can certainly do our part. Most of the damage has already been done even though we haven't felt the effects, and it is irreversible (EPA). Every gallon of gas burns about 20 pounds of CO2, and these pounds add up to tons over the years (fueleconomy.gov). If a majority of the people in the U.S. contribute in this way, there will be a significant difference. Now the solution to these problems is the very simple concept of the bike. It has two wheels, a gearbox, and is powered by the human legs, and has no harmful byproduct. Because the fuel for the bike is food, and the bike is cheap; it provides an easy and cheap mode of transportation. Consuming only 350 calories can propel a cyclist ten miles, a pedestrian three and half miles, and an automobile 100 feet (Benefit of Cycling). Little money needs to be spent on fuel for the bike, because most of the fuel comes from an ordinary meal that you would normally consume. The main cost of a bicycle comes from the actual purchase, which is generally pretty cheap, and on most occasions cheaper than a car. Owning a bike requires minimal maintenance, or maybe replacement due to theft; but the cost of it is fairly cheap.

Other benefits to the bike would be the ability to "transcend time, traffic and the regulated ordinariness of the city" (Benefit of Cycling). When on a bike, you can travel on the roads as an ordinary vehicle, or sometimes take the bike off-road and make your own shortcuts around traffic. Due to the size of the vehicle, cyclists are able to get around traffic a little easier, but there are also downsides to biking. Being in traffic, some drivers are not the friendliest, and pose a threat to cyclists. That is why there is the use of bike trails and designated lanes. Providing a designated area for riders allows for motorists to avoid the cyclists and keep them out of risk. Another danger of cycling is there is no protection from the weather. Once outside, there is no shelter, and a cyclist must tough it out, which can sometimes be very dangerous. One of the huge disadvantages to bicycling is the distance you can travel on it. Because it is human powered, the legs can only drive it so far, until the muscles fatigue and you run out of juice (depending on the fitness of the rider). The average bike rider will only ride about six to seven miles away from their house, but usually to somewhere close. The reason being it takes work to ride the bike, and the work produces sweat; the farther you ride, the more energy required and the more sweat. If you were to ride to work, you would have to have a way of changing and to look professional and clean. This makes it difficult for people to even think of biking as an alternative, but for those that live close, it is a very real option.

Biking would reduce congestion and help to reduce the smog and air pollution if enough people took it up. This would require coordination on a large scale to implement biking in the large city area, and would need facilities to help cyclists prepare for work. However, biking is not a possibility for everyone because of distance; therefore, biking does not provide a solution to the rising gas prices and cost of a car, but it does give an

outlet for some that have the opportunity. The bike is not the most convenient mode of transportation, but it is definitely the cheapest, cleanest, and most efficient, while the car is convenient, but harmful and dirty to the environment.

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A World of Wheels: Works Cited

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